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CONSULTANT  
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February 9, 1996

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

**VIA HAND DELIVERY**

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, DC 20554

Re: Ex Parte Presentation in  
CC Docket No. 92-297

Dear Mr. Caton:

On February 8, 1996, TRW Inc. made a written ex parte presentation — addressed to Donald Gips of the Commission's Office of Plans and Policy and Thomas Tycz of the Commission's International Bureau, and copied to several members of the Commission's Staff — concerning the Commission's ongoing rulemaking proceeding in CC Docket No. 92-297. A copy of the presentation is enclosed.

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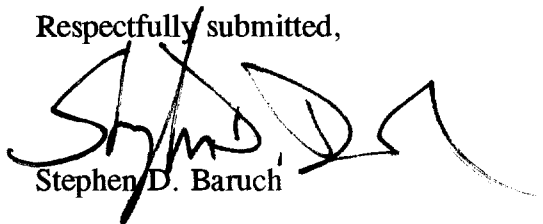
Mr. William F. Caton

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Pursuant to Section 1.1206 of the Commission's rules, the original and one copy of this letter are being submitted for inclusion in the docket file of the above-referenced proceeding.

Respectfully submitted,



Stephen D. Baruch

SDB/kbs

Enclosures

cc (w/o encl.): Donald Gips (By Hand)  
Thomas Tycz (By Hand)  
Jacquie Chorney (By Hand)  
Rudy Baca (By Hand)  
Lisa Smith (By Hand)  
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February 8, 1996  
(via Hand Delivery)

SENIOR COMMUNICATIONS  
CONSULTANT  
MORTON I. HAMBURG

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Thomas S. Tycz  
Chief, Satellite and Radio Communication Division  
International Bureau  
Federal Communications Commission  
2000 M Street, NW, Room 811  
Washington, D.C. 20554

Re: **CC Docket No. 92-297**  
**28 GHz Spectrum Allocation Plan**

Gentlemen:

TRW Inc. wishes to extend its appreciation to the Commission staff for its continued search for a spectrum solution in the 28 GHz band. Largely due to the staff's ongoing active role in encouraging continued discussions and negotiations among the various industry participants, TRW believes that the most recent meetings have produced enormously successful results:

- Through extended efforts over many months, TRW, Hughes, Lockheed-Martin, AT&T, GE Americom, and most of the other GSO Ka-band applicants, have now reached agreement on the basic principles to govern sharing between their respective services, thus removing a major obstacle to successful implementation of the Commission's band plan.

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- After equally extensive negotiations, it is now evident as well that TRW's Odyssey™ and Motorola's Iridium® mobile satellite systems can operate their respective feeder links in the same assigned spectrum with minimal constraints. (All that remains in this respect is for Motorola to confirm TRW's studied analysis, submitted on the record, demonstrating that the feeder link earth station complexes of the two systems may be located as close as 250 km and perhaps even less. TRW has today forwarded to Motorola the NASA and ITU materials upon which its analysis was based and is prepared to resolve any last minute questions that may arise in this respect.)

Both of these achievements go a long way towards resolving one of the most difficult spectrum issues having faced the Commission in many years.

Despite these accomplishments, however, one outstanding difficulty remains: an agreement between Motorola and the LMDS interests concerning the sharing of spectrum between Iridium® and LMDS subscriber-to-hub links. Although TRW understands that some progress was made yesterday in a meeting among these parties, it may not be possible for these entities to arrive at a final agreement before the Commission's timetable makes such an agreement irrelevant. TRW does not suggest that they stop trying. On the other hand, if success can not be achieved in this regard, there appears to be another option which has not previously been seriously evaluated and which, in TRW's view at least, offers the prospect of a global solution to the band plan dilemma.

At the status conference held on February 5 -- at which TRW and Hughes announced their agreement on sharing principles -- Hughes' counsel offered two additional iterations of the Commission staff's Option 2 plan: so-called Options 2A and 2B. As TRW noted at the meeting, it is prepared to support Options 1 (with Odyssey™ at 28GHz instead of reverse band at 19/15 GHz -- now made unworkable by WRC-95), 2, 2A or 2B and believes there is widespread support among all the GSO applicants for these latter proposals. In this connection, Option 2B may present an opportunity to reach a global solution that has eluded the parties and the Commission up to this point.

Option 2B has the desired effect of removing the difficult and contentious issue of LMDS subscriber-to-hub co-frequency operation in the same 150MHz occupied by Iridium® feeder links, thus giving Motorola virtually unconstrained use of these frequencies (subject only to the minimal sharing constraints imposed by the Odyssey™ feeder link operations in the same band). Although Motorola initially identified 200MHz as necessary for its Iridium® feeder links, Motorola has repeatedly acknowledged that it only needs 100MHz of this spectrum in any one geographical area; the remainder having been included for anticipated terrestrial coordination.

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On the other hand, Option 2B also has the desired effect of preserving the full 400 MHz of MSS feeder link spectrum for which the United States fought so hard at WRC-95, and has publicly announced will vigorously pursue at WRC-97. Moreover, it preserves for the 14 or so GSO Ka-band applicants access to the full 1000 MHz of spectrum they have identified as critical to their needs.

Option 2B does not, however, come without some consequences. While LMDS would be relocated to the 28.6-28.7GHz band and thus lose access to 25 MHz more than it has publicly acknowledged it was willing to accept in Option 3, the 100MHz in which it would now operate is free of sharing constraints with all MSS feeder links -- both Iridium® and Odyssey™. And, while Teledesic would be asked to share, on a co-primary basis, the 100MHz it is seeking at WRC-97 -- still retaining sole and unfettered access to 400 MHz for its user terminals -- it is the sole applicant which the Commission has not asked to share spectrum in either Options 1, 2 or 3.

It is significant to point out that **Option 2B is not inconsistent with existing or proposed WRC allocations for this spectrum.** The United States has never proposed to alter the current primary allocation in the 28.6-29.1GHz band from the terrestrial fixed service (which includes LMDS); it has only sought to remove the strictures of RR2613 from the co-primary GSO/FSS allocation in the lower 100MHz of this band. Thus, sharing between LMDS and Teledesic conforms to the ITU Table of Allocations as it presently exists and as Teledesic would desire to have it altered at WRC-97. No party seeks to change this.

The only issue which remains is whether sharing between Teledesic gigalink (gateways) and LMDS is feasible. TRW believes the record demonstrates that it is:

- In its Reply Comments submitted on October 10, 1995 (at page 4), Teledesic states that "it was not feasible for *ubiquitous FSS user terminals* proposed by NGSO and GSO satellite systems to share the same frequencies." The only mention of the Teledesic gigalink terminals (page 10) suggests sharing with LMDS is entirely feasible.
- In their recent February 6, 1996 letter to William F. Caton, Acting Secretary, FCC, the LMDS parties (Endgate Corp., Hewlett-Packard, Inc. and Texas Instruments, Inc.) noted only that "past filings in this proceeding have demonstrated that it is impossible for LMDS to share with Teledesic *user terminals* because they would be ubiquitous and, thus, often in close proximity to LMDS units." (at note 2; emphasis added). There is no mention of the Teledesic gigalink terminals.

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- In the Third Notice of Proposed Rulemaking (at ¶¶ 56-57) in this proceeding ("Third NPRM"), the Commission provided the additional 100 MHz between 28.6-28.7GHz specifically to "ensure that at least some spectrum could be used for gateway terminals, and not be subject to secondary user constraints and RR 2613."

This is precisely what Option 2B ensures -- co-primary use between NGSO/FSS and LMDS.

- Citing the results of the 28GHz Negotiated Rulemaking Committee, the Commission also found in the Third NPRM (at ¶¶ 39,45) that NGSO giga-link gateway terminals could operate on a shared basis with LMDS.
- Teledesic itself supported these findings: "[T]he FCC recognizes that limited sharing of the 27.50-28.35GHz band between LMDS and gateway and giga-link terminals of NGSO satellite systems can be achieved." Comments of Teledesic, September 7, 1995 at 7.

With the foregoing in mind, there can be little question that Option 2B presents a unique opportunity to solve a longstanding dilemma.

On the other extreme is Option 3 -- a proposal which punishes most severely the parties which have developed the very sharing solutions envisioned by the Commission in the Third NPRM (TRW, Lockheed-Martin, Hughes, GE Americom, et al), and leaves wholly untouched the one entity which has not been asked to share with any other contending service provider. The inequity of this alternative is self-evident -- Teledesic is asked to give up no spectrum whatsoever, while the GSO Ka-band applicants are asked to sacrifice 12.5% of the spectrum proposed by the Commission and TRW's Odyssey™ is asked to forego 31% of the feeder link spectrum which it, other parties, and the United States fought so hard at WRC-95 to obtain. An approach of this kind would not only seriously impact the financial viability of the Odyssey™ system, it would grievously undermine the credibility of the United States at WRC-97 and future international conferences. It can not be squared with perceived U.S. obligations to pursue the additional

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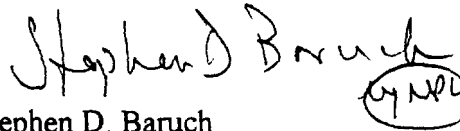
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100 MHz at 28.6-28.7GHz for Teledesic or with rational decision making that will withstand judicial scrutiny. Option 3 is a non-solution that should be avoided at all costs.

Respectfully submitted,



Norman P. Leventhal



Stephen D. Baruch

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